

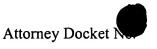
U.S. TENT APPLICATION

## CLAIMS

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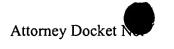
What is claimed is:

- 1. Method of operating a computer system with a central processing unit and a memory system coupled to said central processing system, said memory system comprising a plurality of memory module slots for receiving of memory modules, wherein each memory module comprises a random access memory section and a non-volatile memory section, said method comprising the steps of:
  - detecting a memory error;
- analyzing said memory error, determining a memory module in which said error occurred and creating a log; and
- storing said log in said non-volatile memory section of said memory module.
- 2. Method according to claim 1, wherein said memory error is detected during a diagnostic test.
- 3. Method according to claim 1, wherein said memory error is detected during normal operation.
- 4. Method according to claim 1, wherein said log comprises information about the error type.
- 5. Method according to claim 1, wherein said log comprises information about the location of the memory module.



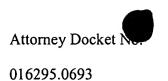


- 6. Method according to claim 1, wherein said log comprises information about the date and time when said error occurred.
- 7. Method according to claim 1, wherein said log comprises information about the system identification.
- 8. Method according to claim 1, wherein said log is stored in a cyclical manner.
- 9. Computer system comprising:
  - a central processing unit;
- a memory system coupled with said central processing unit comprising a plurality of memory module slots for receiving of memory modules, said memory module comprising a random access memory section and a non-volatile memory section;
  - means for detecting an error in said memory system;
  - means for generating a log about said error; and
- means for storing said log in said non-volatile memory section of a memory module.
- 10. Computer system according to claim 9, wherein said means for detecting an error generate an exception within said central processing unit.
- 11. Computer system according to claim 9, wherein said non-volatile memory is divided in a plurality of sub sections each sub section storing one log.

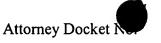


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- 12. Computer system according to claim 11, wherein said sub sections are written in a cyclical manner.
- 13. Computer system according to claim 9, wherein said log comprises information about the error type.
- 14. Computer system according to claim 9, wherein said log comprises information about the location of the memory module.
- 15. Computer system according to claim 9, wherein said log comprises information about the date and time when said error occurred.
- 16. Computer system according to claim 9, wherein said log comprises information about the system identification.
- 17. Method of operating a module within a computer system comprising a non-volatile memory section, said method comprising the steps of:
  - detecting an error during an access to said module;
  - analyzing said error and creating a log; and
- storing said log in said non-volatile memory section of said module.
- 18. Method according to claim 17, wherein said error is detected during a diagnostic test.
- 19. Method according to claim 17, wherein said error is detected during normal operation.



- 20. Method according to claim 17, wherein said log comprises information about the error type.
- 21. Method according to claim 17, wherein said log comprises information about the location of the module.
- 22. Method according to claim 17, wherein said log comprises information about the date and time when said error occurred.
- 23. Method according to claim 17, wherein said log comprises information about the system identification.
- 24. Method according to claim 17, wherein said log is stored in a cyclical manner.
- 25. Computer system comprising:
  - a central processing unit;
- at least one system module coupled with said central processing unit comprising a non-volatile memory section;
  - means for detecting an error in said system module;
  - means for generating a log about said error; and
- means for storing said log in said non-volatile memory section of said system module.
- 26. Computer system according to claim 25, wherein said means for detecting an error generate an exception within said central processing unit.





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- 27. Computer system according to claim 25, wherein said non-volatile memory is divided in a plurality of sub sections each sub section storing one log.
- 28. Computer system according to claim 27, wherein said sub sections are written in a cyclical manner.
- 29. Computer system according to claim 25, wherein said log comprises information about the error type.
- 30. Computer system according to claim 25, wherein said log comprises information about the location of the system module.
- 31. Computer system according to claim 25, wherein said log comprises information about the date and time when said error occurred.
- 32. Computer system according to claim 25, wherein said log comprises information about the system identification.